



**PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Kazuhiko ODA et al.

Group Art Unit: 1751

Application No.: 10/803,880

Examiner: K. VIJAYAKUMAR

Filed: March 19, 2004

Docket No.: 119168

For: MANUFACTURING PROCESS OF CONDUCTIVE COMPOSITION AND A  
MANUFACTURING PROCESS OF CONDUCTIVE PASTE

**APPLICANTS' SEPARATE RECORD OF PERSONAL INTERVIEW**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In reply to the November 13, 2007 personal interview with Examiner Vijayakumar, Applicants provide their separate record of the personal interview. Applicants also appreciate the courtesies shown to Applicants' representative by Examiner Vijayakumar in the November 13, 2007 personal interview.

During the personal interview, Applicants' representative traversed the rejection of independent claims 11, 13 and 15 under 35 U.S.C. §103(a) over U.S. Patent No. 5,296,189 to Kang et al. (hereinafter "Kang"); the rejection of independent claims 11 and 15 under 35 U.S.C. §103(a) over U.S. Patent No. 5,852,076 to Serafin et al. (hereinafter "Serafin"); and the rejection of independent claim 13 under 35 U.S.C. §103(a) over Serafin in view of Kang. The points presented parallel the arguments asserted in the October 26, 2007 Amendment.

As discussed during the personal interview, and as acknowledged in the July 26, 2007 Office Action, neither Kang, nor Serafin, either alone, or in combination, disclose a

manufacturing process of conductive composition including metal particles and ceramic particles wherein an average particle size of metal particles is 0.5  $\mu\text{m}$  or less, and fail to disclose an average particle size of ceramic particles is a quarter of or less than the average particle size of the metal particles, as recited in independent claims 11 and 15.

Additionally, as discussed during the personal interview, and as acknowledged in the July 26, 2007 Office Action, neither Kang, nor Serafin, either alone, or in combination, disclose a manufacturing process of conductive composition including metal particles and ceramic particles wherein an average particle size of metal particles is 0.5  $\mu\text{m}$  or less, and fail to disclose an average particle size of ceramic particles is less than that of the metal particles, as recited in independent claim 13.

Further, as discussed during the November 13, 2007 personal interview, and as acknowledged in the July 26, 2007 Office Action, neither Kang, nor Serafin, either alone, or in combination, disclose a manufacturing process of conductive composition including metal particles and ceramic particles including the step of wetting undried metal particles having been water washed, as recited in independent claims 11, 13 and 15.

Moreover, as discussed during the November 13, 2007 personal interview, Applicants respectfully submit that the above discussed features would not have been obvious to one having ordinary skill in the art at the time of the invention, as alleged in the July 26, 2007 Office.

For example, the current specification clearly states that metal particles with an average size of 0.5  $\mu\text{m}$  or less is likely to aggregate; however, the features of claims 11, 13 and 15 provide the benefit and unexpected results of preventing metal particles having a size of 0.5  $\mu\text{m}$  or less from aggregating, such that conductive composition wherein the metal particles are highly dispersed (see paragraphs [0002] and [0024]). Additionally, Applicants respectfully submit that the ratio of the metal particle sizes to the ceramic particle sizes

provide the added benefit and unexpected results of preventing the identified problem of excess action of medias (ceramic particles) from deforming the metal particles in collision dispersion process (see paragraphs [0004] and [0023]). Furthermore, Applicants respectfully submit that the examples in Table 1 (i.e., examples 1 and 2, and comparative examples 1 and 5) clearly teach the added benefits and unexpected results of the features recited in independent claims 11, 13 and 15.

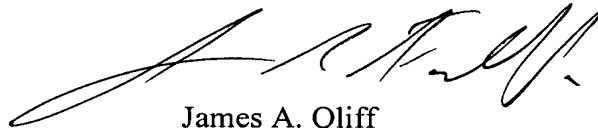
Applicants also respectfully submit that neither Kang, nor Serafin, can reasonably be considered to teach or even suggest a process that corresponds to wetting undried metal particles having been washed, as recited in independent claims 11, 13 and 15, and as described in the current specification as preferably involving a solvent being compatible with an organic component included in the conductive composition and that is incompatible with water, such that water can easily be removed from the metal particles (see paragraph [0018]).

Thus, for at least these reasons and those asserted in the October 26, 2007 Amendment, it is respectfully requested that the rejections be withdrawn. Furthermore, it is respectfully submitted that the rejections of the claims dependent from independent claims 11 and 15 also be withdrawn, at least in view of the patentability of independent claims 11 and 15, as well as for the additional features they recite.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:LXF/mef

Date: November 26, 2007

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